



## PaCoBox: Parametric Compartmentalized Box for SD cards and other things



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## Summary

This is universal model for parametric compartmentalized box for small parts.

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Tags: [microsd](#) [microsdcardholder](#) [microsdcardcase](#)

This is universal model for parametric compartmentalized box for small parts. Originally built for various sizes of MicroSD cards, but can be used for pills or other small things.

It has several interesting properties:

- Any number of compartments (all of the same size).
- Optional round corners and bottom for easy reach.
- Optional embossed labels.
- Optional lid held by magnets.

he model is fully parametric and you can set the following options:

- **Compartments**

- compartment\_count = [3, 2]; - number of compartments [rows, columns].
- compartment\_size = [25, 25, 10]; - size of single compartment.
- compartment\_radius = 6; - corner radius of compartments, set to 0 for square corners.
- use\_lid = true; - generate model for separate lid.

- **Labels**

- use\_labels = true; - generate embossed labels.
- label\_text = [["<", "8", "16"], ["32", "64", ">"]]; - labels for boxes as a list of lists. Structure must match dimensions set in compartment\_count. **Do not use the Customizer GUI to edit this field, as it does not support list of lists!**
- label\_size = 6.5; - font size.
- label\_height = .6; - emboss depth.

- **Bottom magnets** are supposed to be regular polygons. They are either square (then specify 4 as number of sides and diameter is the diagonal size) or round (then specify high number of sides, ie. 32 and then set diameter).

- use\_magnets = true; - create hole for magnets.
- bottom\_magnet\_diameter = 4.5; - outer diameter of single magnet.
- bottom\_magnet\_sides = 4; - number of magnet sides.
- bottom\_magnet\_thickness = 3; - thickness of magnet.
- bottom\_magnet\_cover = .4; - thickness of material above/below magnet. Set to two layers.

- **Lid magnets**

- lid\_magnet\_diameter = 8; - outer diameter of single magnet.
- lid\_magnet\_sides = 16; - number of magnet sides.
- lid\_magnet\_thickness = 1.8; - thickness of magnet.
- lid\_magnet\_cover = .4; - thickness of material above/below magnet. Set to two layers.

- **Walls** (you would probably not need to modify this part)

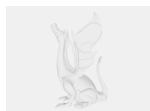
- ft = 1.2; - floor thickness.
- wt = 2; - outer wall thickness.
- st = .86; - separator wall thickness (2 lines of 0.4 mm nozzle).
- lt = .4; - lid tolerance.

## Print instructions

Use the 0.2 mm layer height. The magnets are inserted into both the bottom and lid during print. Pause print before first layer covering the hole (the exact height depends on model) and insert the magnets, then continue printing. Remember the correct orientation of the label!

The default model (SD card box with lid and rounded corners) is supposed to use cube magnets for base (3×3×3 mm) and flat round magnets (8 mm diameter, 1.8 mm thickness) for the lid, but the diameter can be configured. You only have to set the `compartment_radius` and `bottom_magnet_diameter` so there is enough space for magnets.

## Model files



**pacobox.scad**



**pacobox\_microsd\_lid.stl**



**pacobox\_microsd\_simple.stl**



**pacobox\_pill\_tray.stl**



**pacobox\_microsd\_bottom.stl**

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